

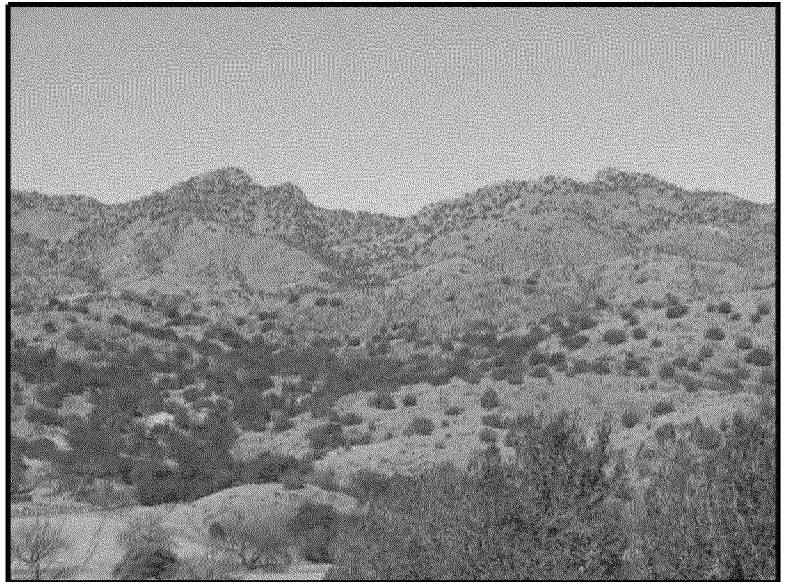
ATTACHMENT 9



TETRA TECH

Geologic Hazards Assessment

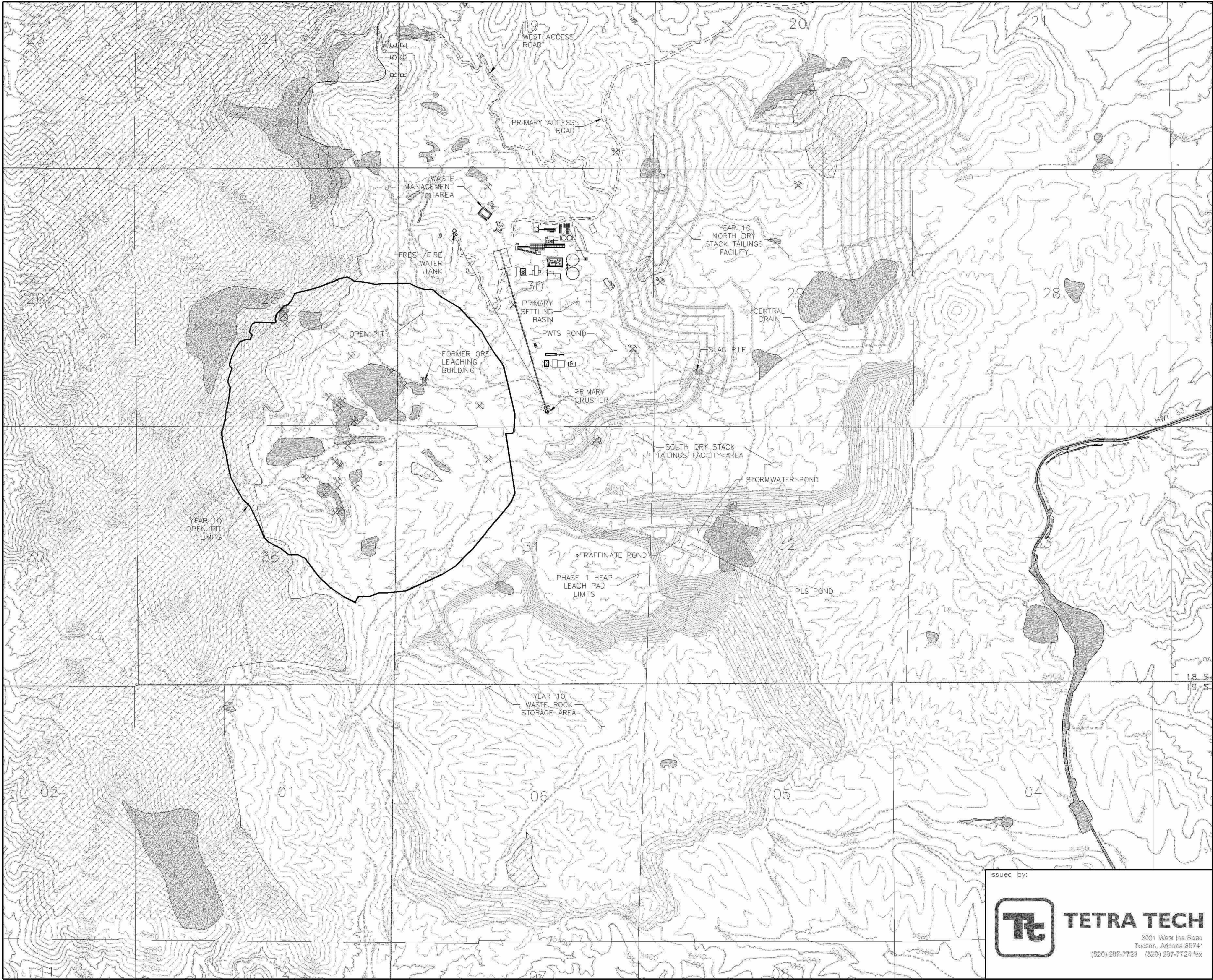
Rosemont Copper



June 2007

complex world

CLEAR SOLUTIONS™



EXPLANATION

ARTIFICIAL FILL – AREAS WHERE NATIVE SOILS AND/OR ROCK HAS BEEN REWORKED BY HUMAN ACTIVITIES OR MATERIAL HAS BEEN DUMPED IN AN UNCONTROLLED MANNER. THESE AREAS PRESENT A HAZARD TO FUTURE CONSTRUCTION ACTIVITIES SINCE THE PLACEMENT TECHNIQUES ARE UNDOCUMENTED.

ROCKFALL AREA – AREAS DELINEATED AS ROCKFALL HAZARD INCLUDE ROCKFALL SOURCE ZONES AS WELL AS RUNOUT AREAS.

EROSION POTENTIAL – THE ENTIRE MAPPED AREA WITH THE EXCEPTION OF THESE SHADED REGIONS COMPRISES AREAS OF LOOSE SOIL AND/OR ROCK THAT MAY ERODE QUICKLY DURING PERIODS OF INTENSE RAINFALL.

ABANDONED MINE LANDS – LOCATION OF HISTORIC MINE WORKINGS. THESE SITES MAY CONTAIN LOW RISK SITES WHERE PREVIOUS MINING ACTIVITY IS REPRESENTED BY SMALL HAND WORKINGS OR MINOR EXCAVATIONS OR HIGH RISK WORKINGS WHERE UNDERGROUND ADITS OR DRIFTS HAVE BEEN ABANDONED WITHOUT BACKFILLING OR OTHER MITIGATIONS. AML SITES LABELED WITH "WAYPOINT" WERE LOCATED FROM AN ON-LINE USGS DATABASE. AML SITES LABELED "SHAFT" WERE LOCATED DURING FIELD INVESTIGATIONS AND DO NOT APPEAR TO BE CONTAINED IN THE USGS DATABASE. PHOTOGRAPHIC DOCUMENTATION OF EACH AML SITE IS PROVIDED IN THE TEXT ACCOMPANYING THIS MAP.

PROPOSED ROAD

EXISTING PAVED ROAD

EXISTING DIRT ROAD

SECTION BOUNDARIES

TOWNSHIP & RANGE BOUNDARIES

NOTE:

CONTOURS SHOWN FOR EXISTING GROUND, DRY TAILING STACKS AND PIT ARE IN 50' INTERVALS. CONTOURS SHOWN FRO THE WASTE ROCK STORAGE AREA ARE IN 25' INTERVALS. CONTOURS SHOWN FOR THE HEAP LEACH PAD ARE IN 20' INTERVALS.

N

SCALE

1000' 0 1000' 2000'

Issued by:

TETRA TECH

3031 West Ina Road
Tucson, Arizona 85741
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Title:

GEOLOGIC HAZARDS MAP

Project:

ROSEMONT COPPER
AQUIFER PROTECTION PERMIT

Project no.:

320794

Location:

PIMA COUNTY, ARIZONA

Date:

2/09

Figure no.:

16

refinements. However, these refinements will not substantially change the final footprint but may alter staging of the pit development. Pit progression information will be updated and presented as an integral part of other updates described in Section 7.12.

Table 7.26 Open Pit Area Summary

Period	Surface Area (million ft²)
Preproduction	9.6
Year 5	21.1
Year 10	30.2
Year 15	30.5
Year 19	30.5

7.9.6 Geologic Hazards

The geologic hazards associated with the Open Pit are listed below.

- There are several areas within the pit footprint with significant rockfall hazards as indicated on Figure 16. In general, most of the rockfall source areas consist of bare or nearly bare rock outcrops in the Mesozoic to Precambrian assemblage on steep slopes above the western wall of the pit. These include areas of observed loose rocks on the surface and talus areas. The rockfall zone depicted along the western wall of the pit presents a high rockfall risk and requires engineered mitigations. CNL addressed this situation in the stability analysis presented in Section 7.9.13.
- The Open Pit has been the subject of historic mining activities. Historic mining activities have ranged from shallow prospector borrow pits to well developed mine adits. The historic mine sites were located during field investigations and using the Abandoned Mine Lands (AML) database available through the USGS. The Abandoned Mine Lands located within the pit limits are shown on Figure 16 by a pick and shovel symbol. Most will be eliminated by the development of the pit. Others will be further investigated and possibly mitigated during final design efforts.
- The Open Pit has several areas of artificial fill where material has been dumped in an uncontrolled manner or native soils and/or rock has been reworked in other ways by human activities. These areas will be excavated during the development of the pit.

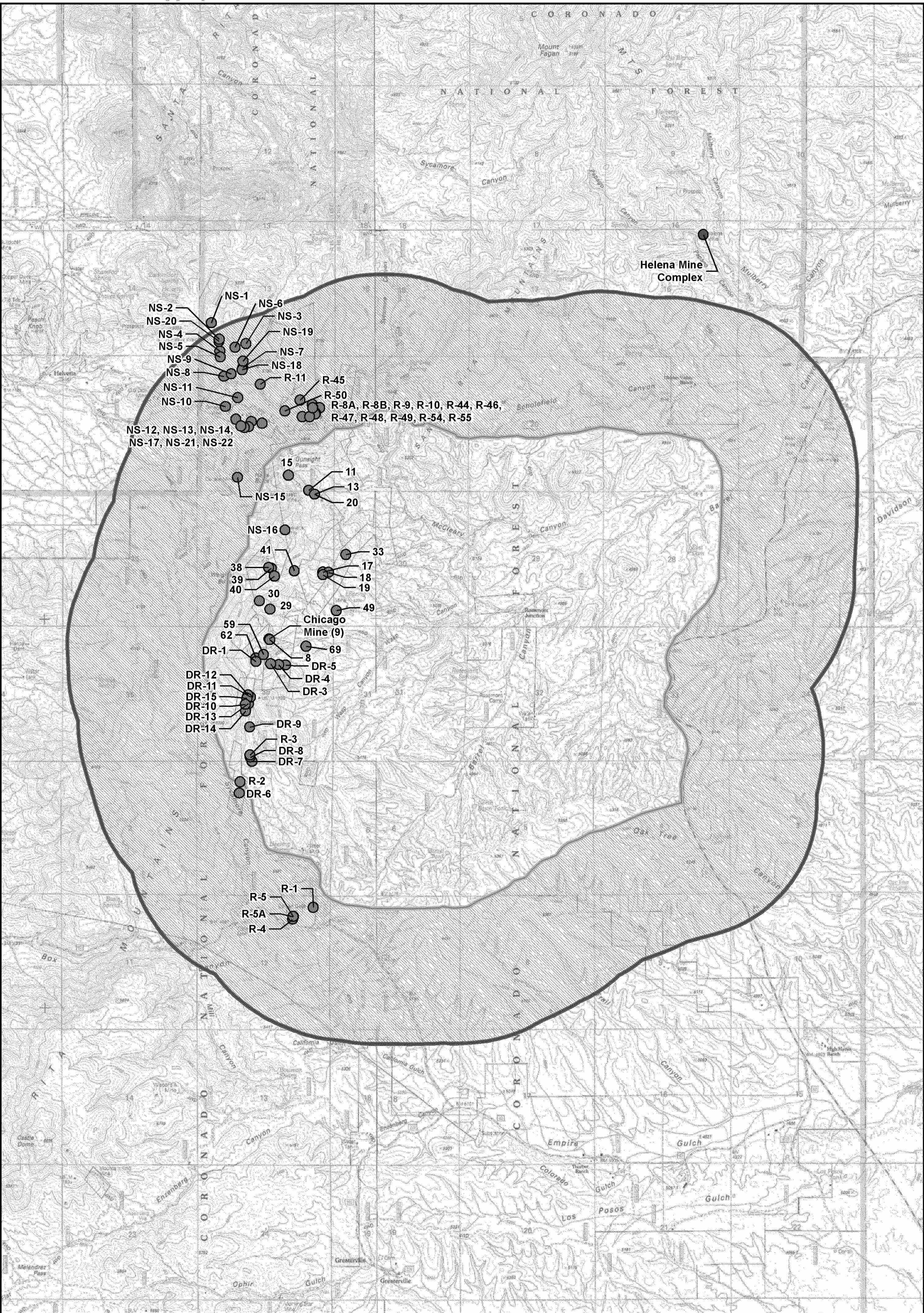
The geologic hazards associated with the Project site are discussed in Section 7.1.5. Additional information is provided in the Geologic Hazards Assessment (Tetra Tech, 2007d^{PD}).

7.9.7 Waste Characterization

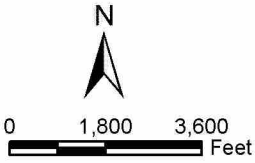
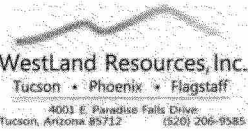
Man-made chemical alteration of materials in the Open Pit is not anticipated since only blasting, excavation, and hauling operations will take place. To assess geochemistry, a series of tests were performed on samples representing materials that may be exposed to potential stormwater, infiltration, and/or natural leaching at closure. These samples are being used in geochemical modeling to determine the post-closure water chemistry in the pit. Analytical results available to date illustrate that limited acid-generating potential exists for the pit materials.

7.9.8 Capacity and Storage Design

Not applicable.



T18S, R15E, Portion of Sections 13, 24, 25, and 36,
T18S, R16E, Portion of Sections 16 and 30,
T19S, R15E, Portion of Sections 1 and 12,
Pima County, Arizona,
Helvetia and Empire Ranch Forest Service
USGS 7.5' Quadrangles



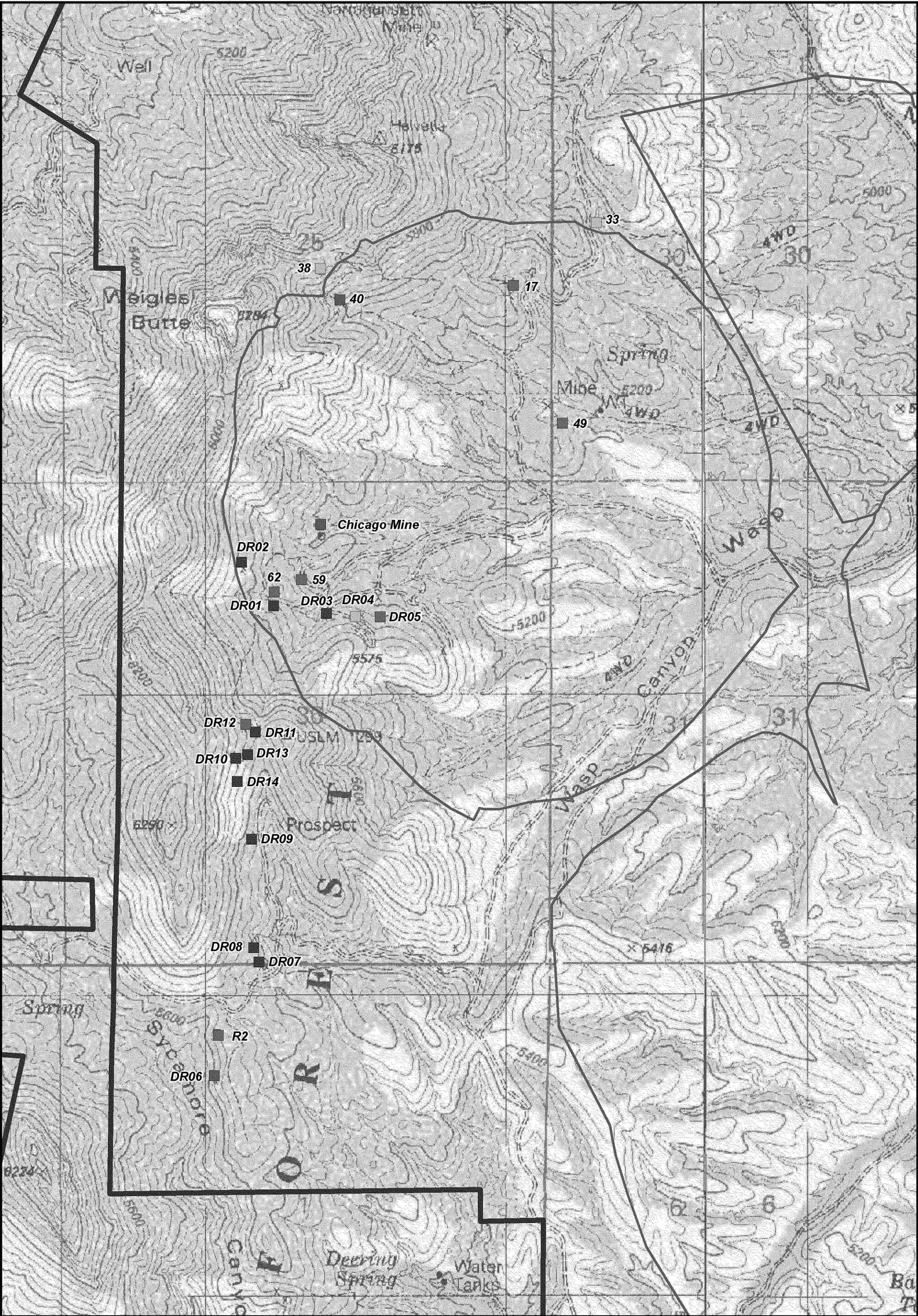
- Legend**
- Emergence Count Survey
 - Reconnaissance-level Survey
 - ▭ Perimeter Fence
 - ▭ Project Area (Perimeter Fence 1 Mile Buffer)

ROSEMONT COPPER COMPANY

2013 Lesser Long-Nosed Bat Roost Monitoring and Reconnaissance-level Surveys in the Rosemont Project Area

ABANDONED MINE FEATURES SURVEYED

Figure 2



Legend

Rosemont Holdings Boundary

Footprint of Mine Boundary

Bat Presence

No Evidence of Bat Use

Noted Insectivorous Bat Use

Noted Nectar Feeding Bat Use

Noted Nectar Feeding and Insectivorous Bat Use

ROSEMONT PROJECT

2011 Bat Roost Survey

Surveyed Mine Features

Figure 4

WestLand Resources, Inc.
Engineering and Environmental Consultants

Appendix A. Survey findings: 2006 and 2008-2013.
No mine features were surveyed in 2007. Bat species four letter code names are provided at end of table.

Feature ID (former ID provided in parentheses)	Location Within Project (Perimeter, Buffer, Outside)	2006 Observations	2008 Observations	2009 Observations	2010 Observations	2011 Observations	2012 Observations	2013 Observations
8 (Shaft 2)	Perimeter	N/A	N/A	N/A	N/A	N/A	N/A	1 unidentified insectivorous bat flying inside. Not internally surveyed due to access issues.
9 (Chicago Mine)	Perimeter	CHME	12–15 LLNB, CHME, MYVE, and possibly COTO roosting. No bats observed exiting (configuration of the mine opening makes video recording difficult).	~32 bats observed exiting. Emergence count stopped when bats began to re-enter. A few ultrasonic bat calls were LLNB, 50 kHz MYSP and 40 kHz MYSP.	N/A	1 LLNB, 4 CHME (one with pup), 1 COTO, and 1 MYSP (likely MYCA).	4 nectar bats observed but unable to confirm species 3 COTO and 6 MYVE in lower section.	3 LLNB in upper stope (dome), 1 COTO in lower back room, 2 MYSP in main sinkhole and 5 nectar bats (3 identified as CHME) in back room. A lot of fresh nectar bat splatter.
11 (A) & 13 (B)	Perimeter	<u>Adit 11</u> : One bat. <u>Adit 13</u> : Insectivorous guano, insect parts, mummified MYVE.	Underground connection found between Adits 11 and 13. <u>Adit 11</u> : General scattering of insectivorous guano. <u>Adit 13</u> : < 5 CHME.	<u>Adit 11</u> : Roosting bats (potentially nectar bats due to size). <u>Adit 13</u> : Nectar bat splatter.	N/A	N/A	N/A	<u>Adit 11</u> : 1 MYSP flying and 1 CHME. <u>Adit 13</u> : Large guano pile with large pellets near entrance. Possible night roost. Partial internal survey. Potentially MYTH.
15 (D)	Perimeter	Bat urine.	Insectivorous guano piles.	Insectivorous guano piles.	N/A	N/A	N/A	1 CHME flying and 1 male MYVE. MYSP exited.
17 (F-1)	Perimeter	CHME and MYVE roosting.	MYVE and CHME roosting.	MYVE and CHME roosting.	N/A	2 CHME.	N/A	1 COTO flying. Partial internal survey because of no access to vertical shaft inside workings.
18 (F-2)	Perimeter	No evidence of bat use observed.	N/A	N/A	N/A	N/A	N/A	No evidence of bat use observed.
19 (F-3)	Perimeter	No evidence of bat use observed.	N/A	No evidence of bat use observed.	N/A	N/A	N/A	No evidence of bat use observed.
20 (B-1)	Perimeter	N/A	Female CHME with pup.	No bats observed but insectivorous guano.	N/A	N/A	N/A	No evidence of bat use observed.
29 (L)	Perimeter	N/A	Moth wings.	Insectivorous bat guano and moth wings.	N/A	N/A	N/A	Limited insectivorous bat guano.
30 (M)	Perimeter	N/A	Bat guano.	Bat guano.	N/A	N/A	N/A	Nectarivorous bat splatter and a few insectivorous guano pellets.
33 (P)	Perimeter	N/A	Nectarivorous bat splatter and one CHME.	Nectarivorous bat splatter and insectivorous bat guano noted. 1 nectarivorous bat (having loud wing beats).	N/A	Fresh insectivorous guano.	N/A	5 CHME (one with pup and 1 briefly captured was a female and nulliparous (never having given birth)).
38 (S) & 39 (S1)	Perimeter	N/A	Adit (S1) connects to glory hole (S). Insectivorous bat guano late in year.	COTO maternity colony.	Emergence count on June 15 with 45 outs and 64 ins at lower entrance, 27 outs and 14 ins at upper entrance. No bats on November 15.	19 COTO emerged during August 28 emergence count (46 from <u>Adit 39</u> and 61 from <u>Adit 38</u>). <i>Lepidoptera</i> (moth) wings were also found on Nov 12.	Emergence count on August 26 with 48 outs and 45 ins at lower entrance; with 14 outs 11 ins at upper entrance. Two sizes of bats & recorded ANPA social directive call	1 MYTH and 1 bat flying (likely COTO). Possible ANPA based on reddish guano.
40 (T)	Perimeter	N/A	MYVE and CHME.	MYVE and CHME.	N/A	3 adults and 2 subadult CHME and 1 MYTH.	N/A	3 CHME, 2 EPFU (1 male briefly captured) and 1 possible MYVE (species ID not confirmed).
41 (U)	Perimeter	N/A	Insectivorous guano.	N/A	N/A	N/A	N/A	No obvious sign of bat use observed. Not internally surveyed because it is a vertical shaft that appears to be blind.
49 (AC)	Perimeter	N/A	No evidence of bat use observed.	3 CHME.	N/A	2 adult CHME and 1 pup.	N/A	2 CHME (1 adult lactating female and 1 subadult that may not be fully volant (able to fly)).

Appendix A. Survey findings: 2006 and 2008-2013.
No mine features were surveyed in 2007. Bat species four letter code names are provided at end of table.

Feature ID (former ID provided in parentheses)	Location Within Project (Perimeter, Buffer, Outside)	2006 Observations	2008 Observations	2009 Observations	2010 Observations	2011 Observations	2012 Observations	2013 Observations
59 (AL)	Perimeter	N/A	No evidence of bat use observed. Potential roosting habitat.	MYVE and CHME.	N/A	2 adult CHME.	N/A	1 COTO.
62 (AO) & DR-01	Perimeter	N/A	Feature has three entrances, about 100 feet total length. <u>Adit 62</u> : No evidence of bat use observed. Potential roosting habitat. <u>Adit DR-01</u> : N/A	<u>Adit 62</u> : MYVE and CHME. <u>Adit DR-01</u> : N/A	N/A	<u>Adit 62</u> : 2 adults and 1 pup CHME. <u>Adit DR-01</u> : 2 CHME in early July. 4 CHME in late July. 1 female had used mammary glands.	N/A	2 CHME in stope (dome).
69 (AV)	Perimeter	N/A	Unknown bat potential. Blind vertical shaft.	N/A	N/A	N/A	N/A	No evidence of feature. No underground habitat. No evidence of bat use observed.
R-1	Buffer	No evidence of bat use.	N/A	N/A	N/A	N/A	N/A	Some insectivorous bat guano.
R-2	Perimeter	N/A	1 LLNB observed roosting late in season.	A large LLNB night roost.	N/A	3 adult LLNB.	Night internal survey on August 26 = active LLNB night roost	1 LLNB roosting in day. Extensive nectarivorous bat splatter. Heavy use during night survey.
R-3	Perimeter	N/A	Unidentified bat exited. No other evidence of bat use.	N/A	N/A	N/A	N/A	Nectarivorous bat splatter observed.
R-4 (Golden Gate Mine)	Buffer	N/A	Not internally surveyed due to small opening. Bat use unknown.	N/A	N/A	N/A	N/A	No evidence of bat use observed. Not internally surveyed due to extremely small opening.
R-5	Buffer	N/A	Small amounts of splatter.	N/A	N/A	N/A	N/A	Possible nectarivorous bat splatter.
R-5A	Buffer	N/A	Small amounts of splatter.	N/A	N/A	N/A	N/A	Possible nectarivorous bat splatter. Few insectivorous bat guano pellets.
R-8A	Buffer	N/A	7+ CHME.	2 CHME.	N/A	13 CHME including lactating females and subadults.	N/A	1 male CHME observed.
R-8B	Buffer	N/A	N/A	1 CHME flew into feature from nearby adit R-8A.	N/A	N/A	N/A	No evidence of bat use observed.
R-9	Buffer	N/A	Several CHME.	7 CHME.	N/A	7 CHME including adults and subadults.	N/A	Nectarivorous bat splatter observed.
R-10	Buffer	N/A	Insect parts (beetle elytra) and insectivorous guano observed.	Insect parts and insectivorous guano noted. This feature appears to be a night roost for ANPA.	N/A	Fresh insectivorous guano present.	N/A	Fresh saturniid moth (large moth) wings in insect bat guano pile.
R-11	Buffer	N/A	No evidence of bat use observed.	N/A	N/A	N/A	N/A	5 CHME observed.
R-44	Buffer	N/A	Insectivorous bat guano.	1 EPFU and 6-8 nectar bats.	N/A	4 CHME and guano and insect parts.	N/A	12 CHME and insectivorous bat guano observed.
R-45	Buffer	N/A	No opening found.	N/A	N/A	N/A	N/A	No evidence of an adit. No underground habitat.

Appendix A. Survey findings: 2006 and 2008-2013.
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Feature ID (former ID provided in parentheses)	Location Within Project (Perimeter, Buffer, Outside)	2006 Observations	2008 Observations	2009 Observations	2010 Observations	2011 Observations	2012 Observations	2013 Observations
R-46 & R-47	Buffer	N/A	<u>Adit R-46</u> : Unsafe to enter. Good airflow. <u>Adit R-47</u> : Large amounts of insectivorous guano and 2 mummified bats and 1 dead MYVE.	<u>Adit R-46</u> : 45+ MYTH (potential maternity colony). <u>Adit R-47</u> : Large amounts of insectivorous guano and 2 mummified bats.	Underground connection found between Adit R46 and Adit R-47. <u>Adit R-46</u> : Emergence count yielded 25 outs and 36 ins, with 20 MYVE and 5 MYTH night roosting on June 24. 5 COTO on November 15. <u>Adit 47</u> : Emergence count yielded 73 outs and 28 ins, 1 CHME night roosting on June 24. 5 CHME on November 15.	<u>Adit R-46</u> : 21 bats ins and 22 bats outs during emergence count in August; An EPFU skeleton observed inside. <u>Adit R-47</u> : 94 bats exited during emergence counts in August (CHME, COTO, MYTH, and MYVE).	<u>Adit R-46</u> : Cluster of 24 MYVE, 1 EPFU, 1 MYTH, 1 MYCA and 1 COTO roosting in May. <u>Adit R-47</u> : Two microclimate data loggers missing in May. August 30 emergence count results: 162 outs and 44 ins – Net = 118 bats including at least MYVE and MYTH	<u>Adit R-46</u> : 1 MYVE, 5 MYTH and 1 MYCI/CA. A lot of insectivorous bat guano. <u>Adit R-47</u> : 1 COTO. Large numbers of bats observed during emergence survey.
R-48	Buffer	N/A	Traces of insectivorous guano.	No evidence of bats use.	N/A	4 CHME.	N/A	Some nectarivorous bat splatter observed.
R-49	Buffer	N/A	No evidence of bat use.	~ 17 CHME in last room.	2 small MYSP night roosting.	2 CHME (July), ~20 CHME (September), and 118 bats (CHME, MYVE, and MYTH) emerging during exit count.	195 outs and 122 ins, Net = 73 bats including CHME, MYTH and MYVE on August 27 emergence count.	8 CHME roosting in entrance stope (dome). Did not internally survey the site to minimize disturbance to roosting bats.
R-50	Buffer	N/A	No opening.	N/A	N/A	N/A	N/A	No evidence of an adit. No underground habitat.
R-54 & R-55	Buffer	N/A	N/A	Winze from R-54 connects to R- 55. <u>Adit R-54</u> : No evidence of bat use. <u>Adit R-55</u> : ~ 7 CHME roosting.	<u>Adit R-54</u> : N/A. <u>Adit R-55</u> : 1 bat exited and 1 entered on June 25.	<u>Adit R-54</u> : N/A. <u>Adit R-55</u> : 2-3 CHME.	<u>Adit R-54</u> : Net = - 2 on August 27 emergence count. <u>Adit R-55</u> : Net = 5 on August 27 emergence count.	<u>Adit R-54</u> : 8 CHME. Insectivorous bat guano. <u>Adit R-55</u> : Bat flew into an open pit located in the floor that accesses R-54.
DR-03	Buffer	N/A	N/A	N/A	N/A	No evidence of bat use.	N/A	Not completely surveyed because it is a vertical shaft. Unknown bat use.
DR-04	Buffer	N/A	N/A	N/A	N/A	Guano and insect parts were observed.	N/A	Insectivorous guano and insect parts.
DR-05	Buffer	N/A	N/A	N/A	N/A	Possible nectar bat guano.	N/A	Individual insectivorous bat guano near working face.
DR-06	Perimeter	N/A	N/A	N/A	N/A	2 CHME (one of which was a subadult) and 1 COTO.	N/A	1 COTO observed roosting.
DR-07	Buffer	N/A	N/A	N/A	N/A	No evidence of bat use.	N/A	Prospect (extremely shallow feature) with a high back wall. No evidence of bat use observed.
DR-08	Buffer	N/A	N/A	N/A	N/A	No evidence of bat use.	N/A	Not surveyed because it is a vertical shaft. Unknown bat use observed.
DR-09	Buffer	N/A	N/A	N/A	N/A	No evidence of bat use.	N/A	Minor nectar bat splatter and a few individual insectivorous bat guano pellets.
DR-10	Buffer	N/A	N/A	N/A	N/A	No evidence of bat use.	N/A	Prospect (extremely shallow feature) with no underground habitat.
DR-11	Buffer	N/A	N/A	N/A	N/A	One nectar bat exited but was not identified to species.	N/A	No evidence of bat use.
DR-12	Buffer	N/A	N/A	N/A	N/A	One nectar bat exited but was not identified to species.	N/A	No evidence of bat use observed. No dark zones in feature.

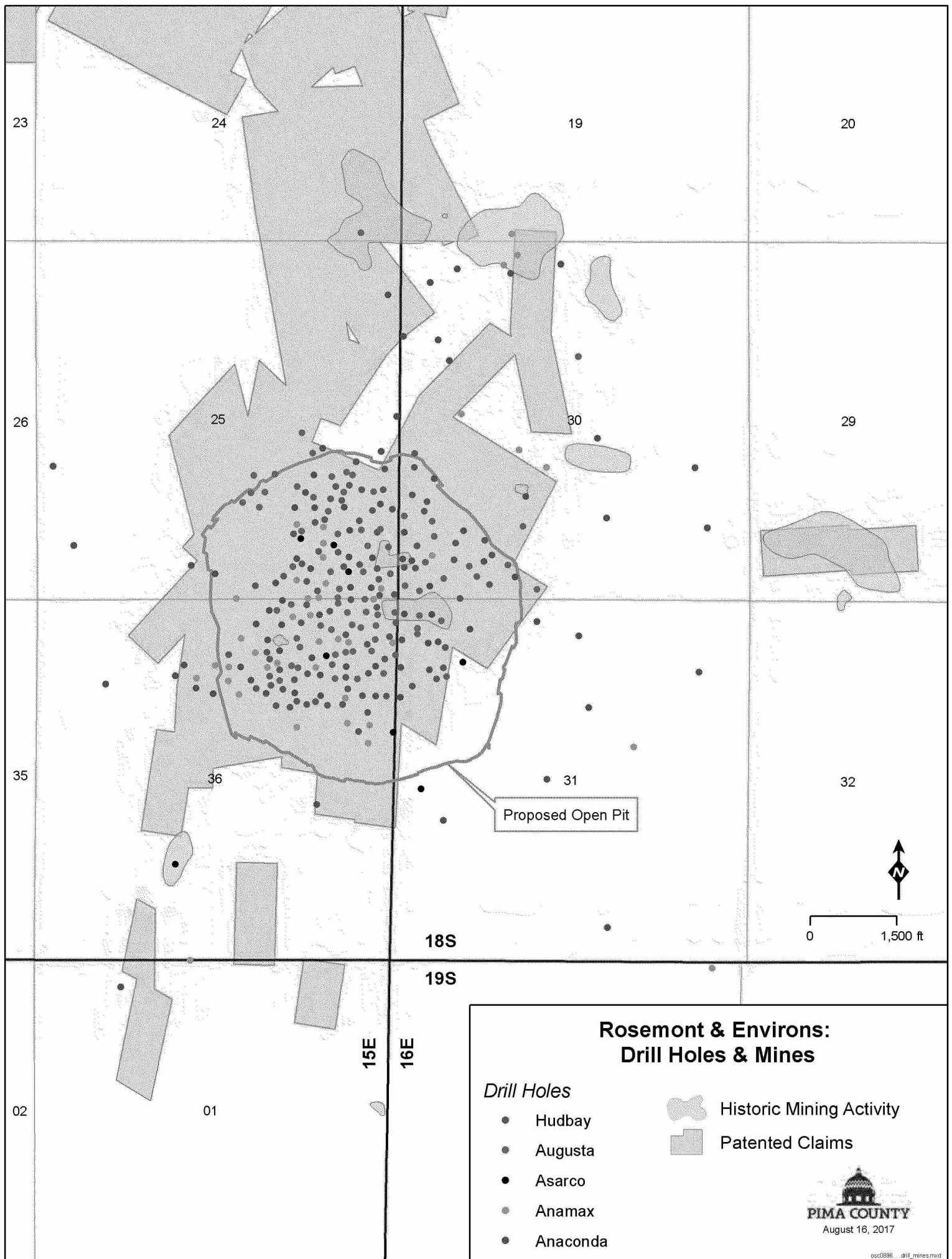
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DR-13	Buffer	N/A	N/A	N/A	N/A	No evidence of bat use.	N/A	Prospect (extremely shallow feature). No dark zones in feature. No evidence of bat use observed.
DR-14	Buffer	N/A	N/A	N/A	N/A	No evidence of bat use.	N/A	Prospect (extremely shallow feature). Unstable. No evidence of bat use observed.
DR-15	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No evidence of bat use observed. Sloping adit.
NS-1	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No underground habitat. Reclaimed.
NS-2	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No underground habitat. Reclaimed.
NS-3	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	Unknown bat use. Not internally surveyed because it is a vertical shaft.
NS-4	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	1 COTO observed roosting.
NS-5	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	2 adits not internally connected but in close proximity. No evidence of bat use observed.
NS-6	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No underground habitat. Reclaimed.
NS-7	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No underground habitat. Reclaimed.
NS-8	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No underground habitat. Reclaimed.
NS-9	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No underground habitat. Reclaimed.
NS-10	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No underground habitat. Reclaimed.
NS-11	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	Not a mine feature. No underground habitat.
NS-12	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	Feature not completely surveyed. Unknown bat use. Nectarivorous bat splatter in surveyed portion.
NS-13	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	Possible nectar bat splatter on metal sheet inside. Possible night roost.
NS-14	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No evidence of bat use.
NS-15	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	1 CHME observed in a side passage and 20+ MYVE flying in entrance area earlier in the season. Large insect bat guano pile and 1 MYTH flying along back passage during late season daytime visit. High humidity and standing water inside.
NS-16	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	Not a mine feature. No underground habitat.
NS-17	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	Prospect (extremely shallow feature).
NS-18	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	2 CHME observed in side drift.
NS-19	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No evidence of bat use observed. Hummingbird nest with 2 eggs in entrance area. Female black-chinned hummingbird observed.
NS-20	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No evidence of bat use observed.

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No mine features were surveyed in 2007. Bat species four letter code names are provided at end of table.

Feature ID (former ID provided in parentheses)	Location Within Project (Perimeter, Buffer, Outside)	2006 Observations	2008 Observations	2009 Observations	2010 Observations	2011 Observations	2012 Observations	2013 Observations
NS-21	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No evidence of bat use observed.
NS-22	Buffer	N/A	N/A	N/A	N/A	N/A	N/A	No evidence of bat use observed.
Helena Mine Complex R-37A, R-37B & R-37C	Outside	N/A	<u>Adit R-37A</u> : Large amounts of nectar bat splatter noted late in season. <u>Adit R-37B</u> : skylight. <u>Adit R-37C</u> : Nectar bat splatter.	<u>Adit R-37A</u> : An exit count was conducted and approximately 4,800 LLNB emerged. <u>Adit R-37B</u> : A few LLNB exited. <u>Adit R-37C</u> : 6 bats (most likely nectar bats due to loud wing beat) observed.	<u>Adit R-37A</u> : No bats in residence on May 14. Emergence counts on July 14 with 26 outs and 18 ins, and more than 143 on August 7 (rained out). No bats on November 18. <u>Adit R-37B and C</u> : Emergence count on July 14 with 7 outs and 6 ins. No bats on November 18.	<u>Adit R-37A</u> : Approximately 4,650 LLNB exited in August and 2,201 in September. <u>Adit R-37B</u> : 6-8 bats exited. <u>Adit R-37C</u> : 1 CHME and 1 LLNB in November.	<u>Adit R-37A</u> : CHME on May 18 – one pregnant. ~2,486 LLNB exited in August and 3,732 exited in September. <u>Adit R-37B</u> : Most bat exit R-37A but in August, 66 bats exited R-37B and in September, only 7 exited R-37B. <u>Adit R-37C</u> : Emergence counts in August = 18 small insectivorous bats & September = 4 small insectivorous bats. No bats in late October.	<u>Adit R-37A</u> : Exit count 8/21/13 = 7811 (recounted in slow motion). Exit count 9/4/13 = ~5700. Exit count 9/13/13 = ~2700. <u>Adit R-37B</u> : Exit count 8/21/13 = 25. Exit count 9/4/13 = 16. Exit count 9/13/13 = 6. <u>Adit R-37C</u> : N/A
Helena Mine Complex R-38A & R-38B	Outside	N/A	<u>Adit R-38A</u> : 20- 30 LLNB. <u>Adit R-38B</u> : skylight.	<u>Adit R-38A</u> : 58 LLNB. <u>Adit R-38B</u> : 4 CHME.	<u>Adit R-38A</u> : 5 CHME, two LLNB and 1 MYVE observed roosting on May 14. Emergence count conducted on July 14 with 31 outs and 14 ins. More than 13 bats were observed before the count was rained out on August 7. 5 CHME roosting on November 18. <u>Adit R-38B</u> : 2 CHME observed July 14, also 2 CHME roosting in entrance room August 7.	<u>Adit R-38A</u> : Sixteen LLNB exited in September. 1 COTO also observed in November. <u>Adit R-38B</u> : 4 CHME observed.	<u>Adit R-38A</u> : 4 CHME and 1 LLNB observed day roosting on May 18. Emergence count conducted on August 29 – total = 8 bats. Another count conducted on September 17, 9 bats were observed. 1 CHME roosting on November 26. <i>Mephitis macroura</i> (hooded skunk) observed in November. <u>Adit R-38B</u> : Emergence count on August 29, 65 bats outs and 66 ins. Emergence count on September 17, 62 bats outs and 41 ins.	<u>Adit R-38A</u> : Exit count 8/21/13 = 12. Exit count 9/4/13 = 2. Exit count 9/13/13 = 11. <u>Adit R-38B</u> : Exit count 8/21/13 = 27. Exit count 9/4/13 = 20. Exit count 9/13/13 = 16.

Species codes:
LLNB: *Leptonycteris yerbabuenae* (Lesser long-nosed bat)
ANPA: *Antrozous pallidus* (pallid bat)
MYCI/CA: *Myotis californicus* (California myotis) or *M. ciliolabrum* (Western small-footed myotis)
EPFU: *Eptesicus fuscus* (big-brown bat)
MYSP: unidentified myotis species
CHME: *Choeronycteris mexicana* (Mexican long-tongued bat)
MYTH: *Myotis thysanodes* (fringed myotis)
COTO: *Corynorhinus townsendii* (Townsend's big-eared bat)
MYVE: *Myotis velifer* (cave myotis)



MEMORANDUM

TO: Rosemont Copper Company
FROM: Fennemore Craig, P.C.
DATE: November 30, 2007
RE: Technical Memorandum -- Rosemont Copper Project Unpatented Mining Claims and Sites Map (Issue No. Admin-5; Item No. 21)

On October 19, 2007, Ms. Jeanine A. Derby, Forest Supervisor, on behalf of Coronado National Forest ("CNF"), sent Rosemont Copper Company ("RCC") a letter requesting additional information relating to the Rosemont Mine Plan of Operations ("MPO"). One particular aspect of the request concerns information relating to the unpatented mining claims and sites associated with the MPO. Specifically, CNF requested that RCC provide "[a] map showing the individual unpatented lode mining claims in relationship to the private ownership and National Forest system lands." The purpose of this Technical Memorandum is to respond to the request specifically identified above.

Attached please find a map depicting the 899 unpatented mining claims and sites owned and maintained by RCC as of the present date in relation to surrounding private and federal lands.

Attachment

